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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,847	04/05/2004	Uri Adler	P-5778-US	3124

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EXAMINER	
FERGUSON, MARISSA L	
ART UNIT	**PAPER NUMBER**
2854	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/816,847	ADLER ET AL.	
	Examiner	Art Unit	
	Marissa L. Ferguson-Samreth	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/27/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The declaration under 37 CFR 1.132 filed 4/5/06 is insufficient to overcome the rejection of claims1-23 based upon McGarry et al. in view of the newly cited reference Desie et al.. The declaration fails to provide information that would overcome the prior art rejection. As mentioned below, it would have been obvious to combine the two references for the purpose of providing a stable wide format electrophotographic printing system that prints at high speed and with reliability.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGarry et al. (US Patent 6,375,296) in view of Desie et al. (US Patent 6,174, 095).

McGarry et al. teaches a wide format printing apparatus and method (Column 5, Lines 20-22) including print head assemblies (12a-12d) with a plurality of printing sub-units (30 and Figure 9) being positioned to cover the width of a wide format substrate (19,50), wherein at least two of the sub-units exhibit an overlap over a portion of a width of a wide format substrate (Figure 9), a controller (20) to control the print heads to print across a the width of a wide format substrate (Column 3, Lines 66-67 and Column 4, Lines 1-11) and wherein the print heads are arranged to print an image narrower than

the image printed across a width of a wide format substrate (Figures 3,9, Column 5, Lines 20-32, Lines 58-67, Column 6, Lines 1-4 and many references throughout).

However, he does not explicitly disclose electrographic printing apparatus including electrophotographic printing sub-units. Desie et al. teaches a large format printer with a plurality of electrophotographic print heads (100a-100e) that overlap a portion of a width of substrate (Figures 1 and 2, Desie et al., Column 4, Lines 47-53).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by McGarry et al. to replace the printing units thereof with printing units electrophotographic printing units as taught by Desie et al., since Desie et al. teaches that it is advantageous to provide a printer that prints large format printouts at a high printing speed with good long term stability and reliability.

3. Claims 1,8-11,12, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296) and Desie et al. (US Patent 6,174, 095).

Regarding claims 1 and 12, Kamir et al. teaches the claimed method and invention including a wide format printing apparatus (Figures 1,3 and 3A) including a plurality of printing sub-units (20C, 20K, 20M, 20Y) arranged to print an image. However, he does not explicitly disclose sub-units being positioned to print across a wide format substrate, a printing controller to control the sub-units to print across a wide format substrate and wherein the sub-units are arranged to print an image narrower

than the image across a substrate and electrographic printing apparatus including electrophotographic printing sub-units.

McGarry et al. teaches print head assemblies (12-12d) with print heads (30 and Figure 9) being positioned to print across a wide format substrate (19,50), wherein at least two of the sub-units exhibit an overlap over a portion of a width of a wide format substrate (Figure 9), a controller (20) to control the print heads to print across a the width of a wide format substrate (Column 3, Lines 66-67 and Column 4, Lines 1-11) and wherein the print heads are arranged to print an image narrower than the image printed across a width of a wide format substrate (Figures 3,9, Column 5, Lines 20-32, Lines 58-67, Column 6, Lines 1-4 and many references throughout).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Kamir et al. to replace the printing units thereof with printing units that print an image narrower than the images printed across a substrate as taught by McGarry et al., since McGarry et al. teaches that it is advantageous to prevent truncating of an image when printing on a continuous web.

However, Kamir et al. and McGarry et al. do not explicitly disclose electrographic printing apparatus including electrophotographic printing sub-units. Desie et al. teaches a large format printer with a plurality of electrophotographic print heads (100a-100e) that overlap a portion of a width of substrate (Figures 1 and 2).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by McGarry et al. to replace the printing units thereof with printing units electrophotographic printing units as

taught by Desie et al., since Desie et al. teaches that it is advantageous to provide a printer that prints large format printouts at a high printing speed with good long term stability and reliability.

Regarding claims 8,22 and 23, Kamir et al. teaches a method and apparatus comprising an erasing unit (22) to erase non-fused toner images.

Regarding claim 9, Kamir et al. teaches a method and apparatus comprising a toner-recycling unit (48).

Regarding claim 10, Kamir et al. teaches a method and apparatus comprising a color toner separation unit (42) that stores each of the separate colors (C,M,Y) in a toner reservoir (Page 3, Paragraph 0066)..

Regarding claim 11, Kamir et al. teaches a detachable printing apparatus (examiner notes that since the print sub-units can be attached they inherently must be detachable).

4. Claims 2,4,6,7 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296) and Desie et al. (US Patent 6,174, 095) as applied to claims 1 and 12 above, and further in view of Narushima et al. (US Patent 6,831,755).

Regarding claims 2,4 and 18-20, Kamir et al., McGarry et al. and Desie et al. all teach the claimed invention and method including a controller (14), however the prior arts do not explicitly disclose an image recognition unit including a pattern recognition system. Narushima et al. teaches a printer with image correcting capability with an

imaging unit (142,147) that includes a processor (22,23) for recognizing patterns (Column 24, Lines 9-21). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al. in view of McGarry et al. and Desie et al., to include an image recognition unit with a pattern recognition system as taught by Narushima et al., since Narushima et al. teaches that it is advantageous to perform color analysis in order to optimize and analyze printed images.

Regarding claims 6, 7and 21, Kamir et al., McGarry et al. and Desie et al. all teach the claimed method and invention including electrophotographic print heads (100a-100e) as taught by Desie et al., however the prior arts do not explicitly disclose a printing controller that enables tuning of the sub-units and adjusting the color output. Narushima et al. teaches a controller or controllers that operates with a processing system that in turns controls, tunes and adjust image data calculating units (Column 12, Lines 46-56, Lines 62-64, Column 13, Lines 1-5, Claims 22-24 and many references throughout the patent) and produces/enables color output (Column 21, Lines 28-41, Column 22, Lines 21-23 and Lines 31-38 and many references throughout patent). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al, in view of McGarry et al. and Desie et al., to replace the controller thereof, with a controller that controls, tunes and adjust printing sub-units as taught by Narushima et al., since Narushima et al. teaches that it is advantageous to correct the differences in color tone or contrast between an image displayed in order to provide a clear, concise image.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296), Desie et al. (US Patent 6,174, 095) and Narushima et al. (US Patent 6,831,755) as applied to claim 2 above, and further in view of Bowers (US Patent 5,296,947).

Kamir et al., McGarry et al. and Narushima et al. all teach the claimed method and invention with the exception of image recognition unit including a colorimeter. Bowers teaches a color reproduction system with a colorimeter (Column 5, Lines 37-51). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al. to include a colorimeter as taught by Bowers, since Bowers teaches that it is advantageous to diminish the differences between contrast and tone thereby equalizing the printed and displayed images.

6. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296) and Desie et al. (US Patent 6,174, 095) as applied to claim 1 above, and further in view of Takahashi et al. (US Patent 5,847,729).

Kamir, McGarry et al. and Desie et al. all teach the claimed method and invention including electrophotographic print heads (100a-100e) as taught by Desie et al., however the prior arts do not explicitly disclose a printing controller that is operable to analyze the output of a print apparatus. Takahashi et al. teaches a printing apparatus with a controller (1004) that analyzes information of the print heads (Column 17, Lines 1-5). It would have been obvious at the time the invention was made to a person having

ordinary skill in the art to further modify the invention as taught by Kamir et al. in view of McGarry et al. and Desie et al., to replace the controller thereof, with a controller that analyzes as taught by Takahashi et al., since Takahashi et al. teaches that it is advantageous to correct the differences in color tone or contrast between an image displayed in order to provide a clear, concise image.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296), Desie et al. (US Patent 6,174, 095) and Takahashi et al. (US Patent 5,847,729) as applied to claim 13 above, and further in view of Narushima et al. (US Patent 6,831,755)

Kamir et al., McGarry et al., Desie et al. and Takahashi et al. all teach the claimed method and invention including electrophotographic print heads (100a-100e) as taught by Desie et al., however the prior arts do not explicitly disclose a printing controller that enables tuning of the sub-units and adjusting the color output. Narushima et al. teaches a controller or controllers that operates with a processing system that in turns controls, tunes and adjust image data calculating units (Column 12, Lines 46-56, Lines 62-64, Column 13, Lines 1-5, Claims 22-24 and many references throughout the patent) and produces/enables color output (Column 21, Lines 28-41, Column 22, Lines 21-23 and Lines 31-38 and many references throughout patent). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al. in view of McGarry et al., Desie et al. and Takahashi et al., to replace the controller thereof, with a controller that controls, tunes and adjust printing sub-units as taught by Narushima et

al., since Narushima et al. teaches that it is advantageous to correct the differences in color tone or contrast between an image displayed in order to provide a clear, concise image.

8. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296), Desie et al. (US Patent 6,174, 095), Takahashi et al. (US Patent 5,847,729) and Narushima et al. (US Patent 6,831,755) as applied to claim 14 above, and further in view of Prats (US Patent 4,937,593).

Kamir et al., McGarry et al., Desie et al., Takahashi et al. and Narushima et al. all teach the claimed invention and method including electrophotographic print heads (100a-100e) as taught by Desie et al., however the prior arts do not explicitly disclose adjusting the rotation and translation of a sub-unit. Prats teaches a printhead control system that adjust the printhead in translational or rotational directions (Column 1, Lines 38-41 and Column 2, Lines 40-46). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al. in view of McGarry et al., Desie et al., Takahashi et al. and Narushima et al., to replace the printhead thereof, with a printhead that moves in a translational or rotational direction as taught by Prats, since Prats teaches that it is advantageous to provide a moveable print head in order to provide very precise printing.

9. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamir et al. (US Publication 2002/0109663) in view of McGarry et al. (US Patent 6,375,296),

Desie et al. (US Patent 6,147, 095) and Takahashi et al. (US Patent 5,874,729) as applied to claim 13 above, and further in view of Tuli (US Patent 6,154,242).

Kamir et al., McGarry et al., Desie et al. and Takahashi et al. all teach the claimed invention and method including electrophotographic print heads (100a-100e) as taught by Desie et al., however the prior arts do not explicitly disclose adjusting an offset of a sub-unit. Tuli teaches a thermal print head that be offset adjusted (Column 3, Lines 14-15, Column 4, Lines 59-60 and Claim 3, Lines 34-37). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Kamir et al., McGarry et al., Desie et al. and Takahahi et al., to replace the printhead thereof, with a printhead that is offset adjusted as taught by Tuli, since Tuli teaches that it is advantageous to provide an efficient and accurate method of alignment thereby providing aligned and precise images.

Response to Arguments

10. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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